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**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA**

VANESSA JACKSON, on behalf of herself, all
others similarly situated, and the general public,

Plaintiff,

v.

VNGR BEVERAGE LLC,

Defendant.

Case No: 24-cv-6666

CLASS ACTION

**COMPLAINT FOR VIOLATIONS OF
CAL. BUS. & PROF. CODE §§17200 *et*
seq.; CAL. BUS. & PROF. CODE §§17500
et seq.; CAL. CIV. CODE §§ 1750 *et seq.*;
and BREACH OF EXPRESS AND
IMPLIED WARRANTIES**

DEMAND FOR JURY TRIAL

Plaintiff Vanessa Jackson, on behalf of herself, all others similarly situated, and the general public, by and through her undersigned counsel, hereby sues Defendant VNGR Beverage LLC (“VNGR” or “Defendant”), and alleges the following upon her own knowledge, or where she lacks personal knowledge, upon information and belief, including the investigation of her counsel.

INTRODUCTION

1. VNGR sells soda beverages branded “Poppi” (hereinafter “Poppi” or the “Products”),¹ which it labels and markets as beneficial to overall health, and specifically gut health.



2. This labeling is false or highly misleading for several reasons. First, Poppi is a sugar-sweetened beverage (SSB), containing up to 100% of its calories from free and added sugar,² and there is a vast body of scientific evidence demonstrating that consuming sugar-sweetened beverages harms rather than supports overall health—and digestive health in particular.

3. Second, because the fiber content (approximately 2 grams) of Poppi is negligible, consuming Poppi does not provide any meaningful gut health benefits.

¹ The Products include at least the following flavors: Strawberry Lemon, Raspberry Rose, Cherry Limeade, Orange, Classic Cola, Doc Pop, Root Beer, Ginger Lime, Watermelon, Grape, Lemon Lime, Wild Berry, Cranberry Fizz, Blueberry Sage, Orange Cream, Peach Tea, Grapefruit, Pineapple Mango, and Pineapple Turmeric. To the extent Defendant sold additional flavors during the Class Period, this Complaint should be read to include rather than exclude any such flavors.

² Because the free sugars in Poppi act physiologically identically to added sugars, *see infra* Part II.A, and the Products include both, the term “FA Sugar” is used to refer to free and added sugars throughout this Complaint.

4. Third, Poppi's labeling omits material facts regarding the harmful effects of FA Sugar on overall health and digestive health.

5. Accordingly, Plaintiff brings this action against VNGR on behalf of herself, similarly-situated Class Members, and the general public to recover compensation for injured Class Members.³

JURISDICTION & VENUE

6. This Court has original jurisdiction over this action under 28 U.S.C. § 1332(d)(2) (The Class Action Fairness Act) because the matter in controversy exceeds the sum or value of \$5,000,000, exclusive of interest and costs, and at least one member of the class of plaintiffs is a citizen of a State different from Defendant.

7. The Court has personal jurisdiction over Defendant because it has purposely availed itself of the benefits and privileges of conducting business activities within California, specifically through distributing and selling the Products in California and transactions giving rise to this action occurred in California.

8. Venue is proper pursuant to 28 U.S.C. § 1391(b) and (c), because Defendant resides (*i.e.*, is subject to personal jurisdiction) in this district.

PARTIES

9. Plaintiff Vanessa Jackson is a resident and citizen of San Diego County, California.

10. Defendant VNGR Beverage LLC is a Texas limited liability company with its principal place of business in Austin, Texas.

FACTS

I. DEFENDANT LABELS AND MARKETS POPPI WITH HEALTH AND WELLNESS CLAIMS

11. For more than four years preceding the filing of this Complaint and continuing today, Defendant has sold and continues to sell Poppi on a nationwide basis, including in California.

12. As Defendant is well aware, consumers prefer healthful foods and are willing to pay more for, or purchase more often, products marketed and labeled as healthy. For instance, a Nielsen 2015 Global

³ Because VNGR changed Poppi's labeling in or around early 2024 to remove the labeling claims challenged herein, Plaintiff is not seeking injunctive relief.

Health & Wellness Survey found that “88% of those polled are willing to pay more for healthier foods.”⁴

13. Accordingly, Defendant labels and markets Poppi with statements conveying the message that consuming Poppi is beneficial to overall health, and specifically to gut health.

14. During the Class Period, Poppi labels bore at least the following statements, which individually and in the context of the label as a whole convey a message that Poppi benefits digestive health and overall health:

- a. “For a Healthy Gut”;
- b. “Be Gut Healthy”;
- c. “better for you prebiotic soda”;
- d. “Gut Health Never Tasted this Good”;
- e. “Bubbles with Benefits”;
- f. “Immunity Sidekick”;
- g. “Prebiotics for a Healthy Gut.”

15. Individual cans and multipacks displaying the challenged claims are shown below, in the Raspberry Rose and Cherry Limeade flavors.

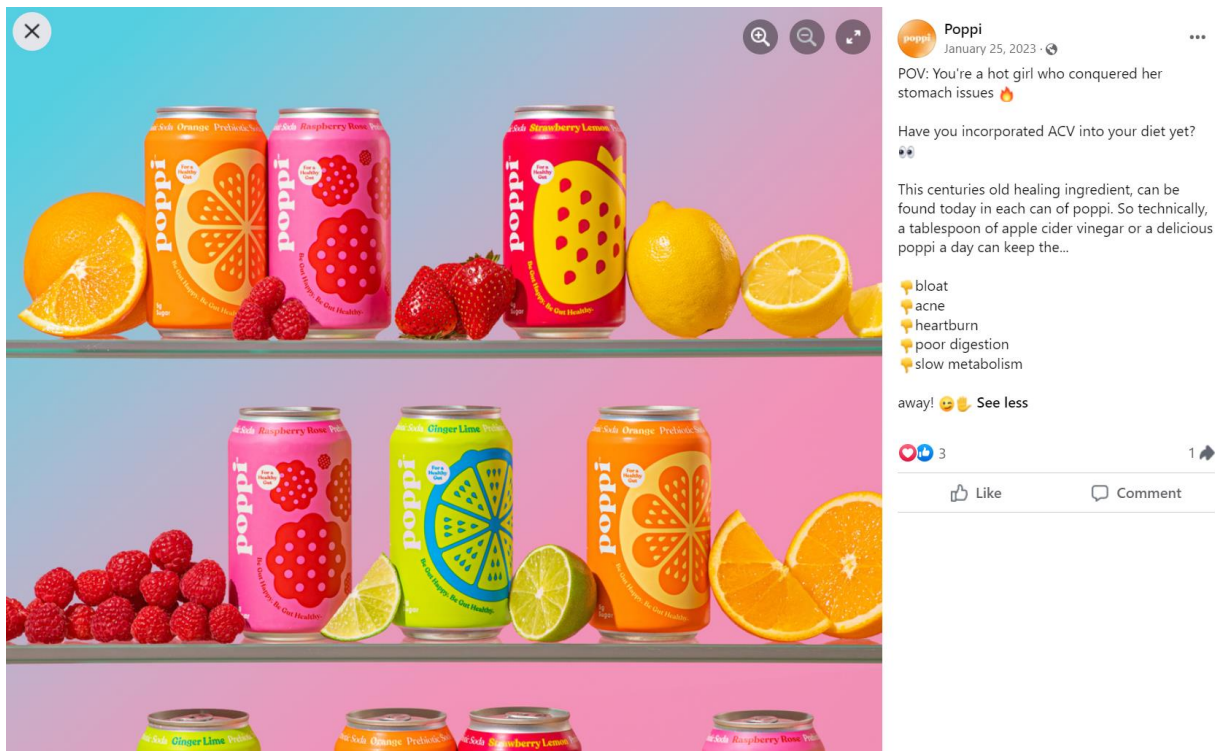


⁴ Nancy Gagliardi, “Consumers Want Healthy Foods—And Will Pay More For Them,” *Forbes* (Feb. 18, 2015) (citing Nielsen, Global Health & Wellness Survey, at 11 (Jan. 2015)).

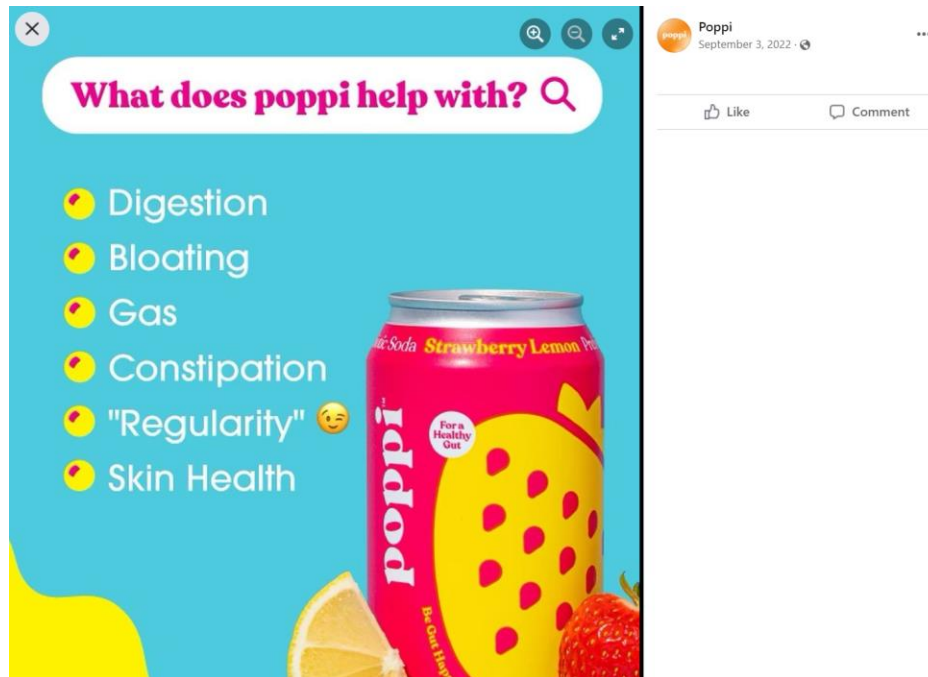


16. Additionally, Defendant's off-label marketing reinforces its on-label representations. Poppi has a large social media presence, with nearly a million followers across Instagram, Facebook, and Tik Tok. Defendant has used these platforms to reiterate and spread its health and wellness messaging.

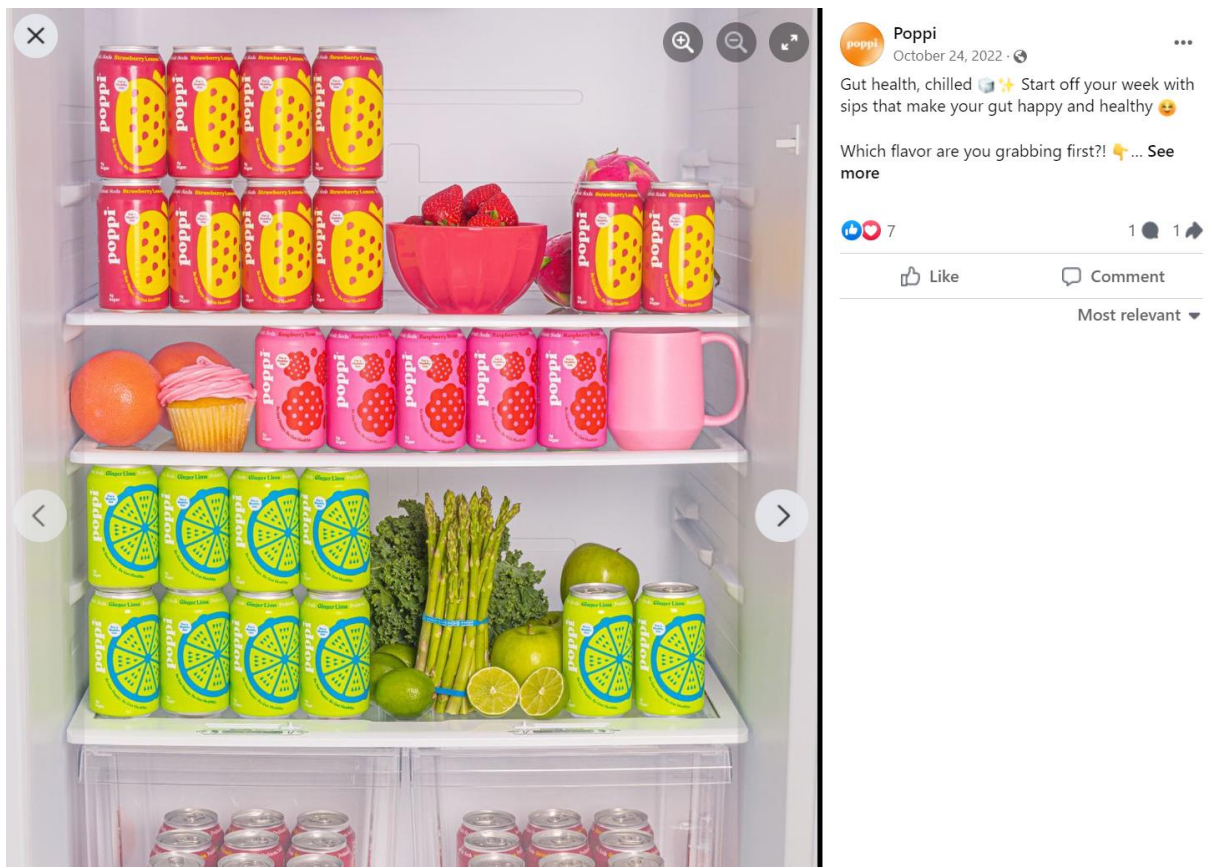
17. For example, Defendant has posted that "a delicious poppi a day can keep [various health issues] away," as shown below.



18. In another post, depicted below, Defendant tells consumers that Poppi “help[s] with” numerous health problems.



19. Defendant has also posted that “sip[ping]” Poppi “make[s] your gut . . . healthy[.]”



20. In another post, Defendant touts Poppi as “supporting glowing skin, gut health, and that extra immunity boost[.]”

Instagram

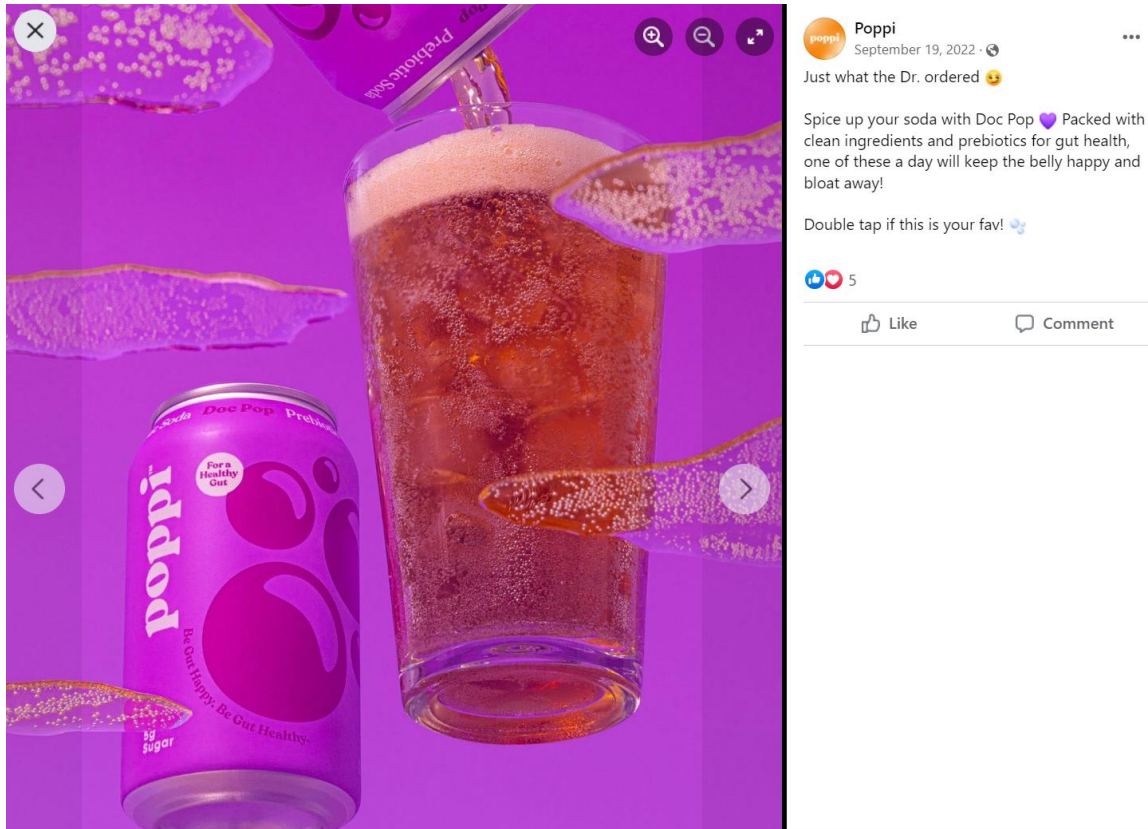
Log In Sign Up



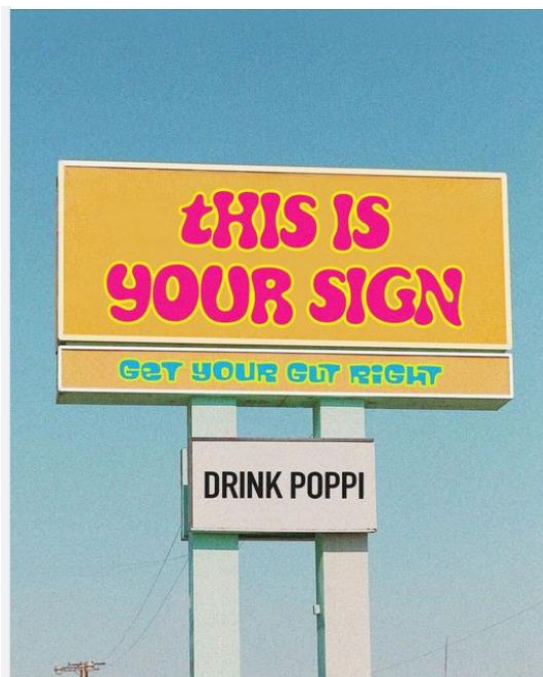
21. In a post about its Classic Cola flavor, Defendant markets it as “Cola, but good for you”:



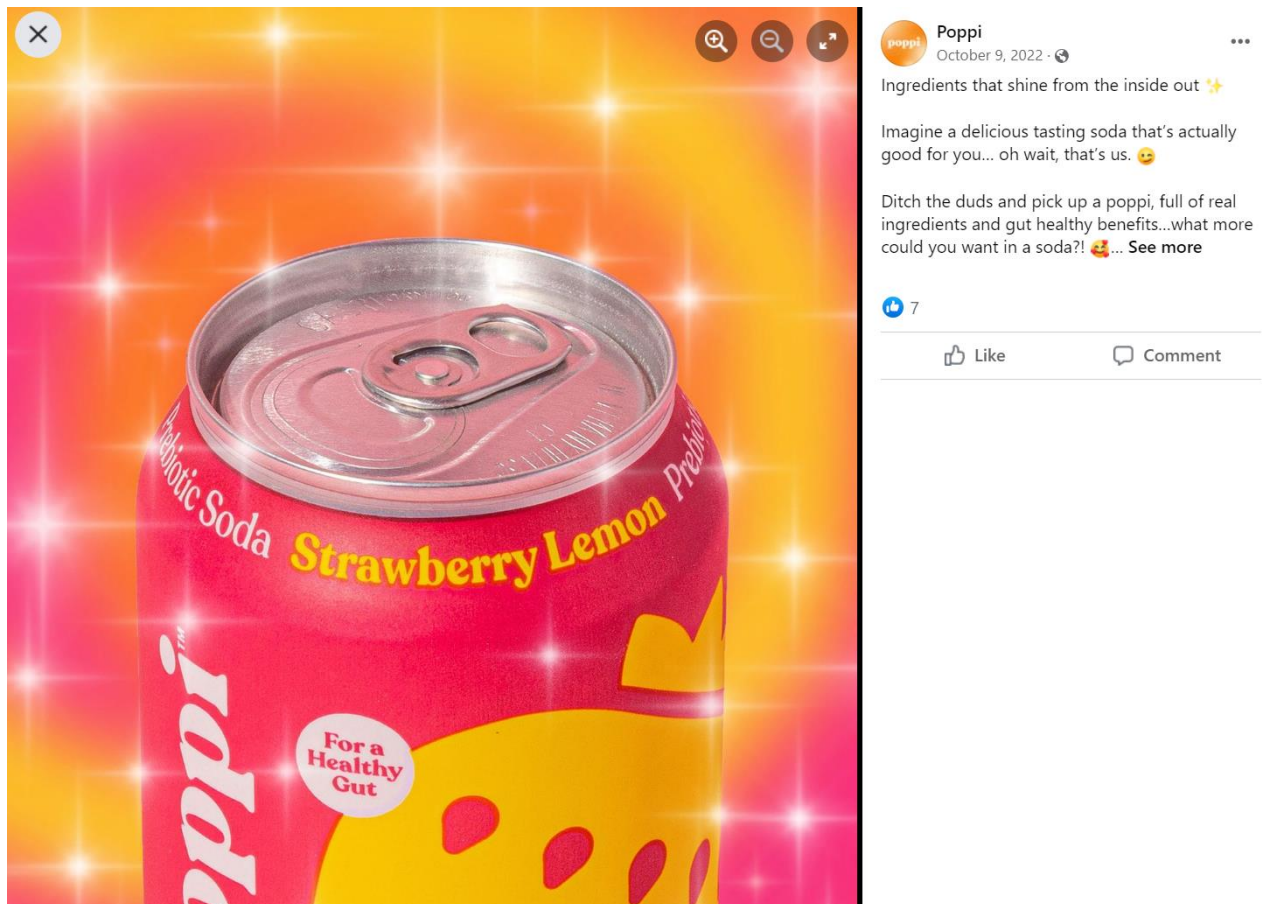
22. Defendant also tells consumers that Poppi is “Packed with . . . prebiotics for gut health” and that drinking “one . . . a day will keep the . . . bloat away!”:



23. In another post, Defendant tells consumers to “Drink Poppi” to “Get Your Gut Right”:



24. In several Facebook posts, Defendant tells consumers Poppi is “actually good for you”:



25. In a Facebook video, the founder of Poppi says about Poppi, “I wanted to create something that was healthy and tasted amazing. And that’s exactly what I did.”⁵

26. In an interview featured on The Today Show, the founder described Poppi’s development, saying she would tell samplers, “Try this amazing tasting drink, and by the way, it’s good for you.”⁶

II. SCIENTIFIC EVIDENCE DEMONSTRATES FA SUGAR CONSUMPTION HARMS DIGESTIVE AND OVERALL HEALTH

27. Notwithstanding its marketing of Poppi as good for gut and overall health, as Defendant knows, consuming FA Sugar actually *harms* gut and overall health.

A. Free and Added Sugar Act in an Identical Manner Physiologically

28. A “free sugar” is any sugar added to a food or drink or that is already in honey, syrup, fruit juice, and fruit juice concentrate.⁷ These sugars are “free” because they are not encased in the cells (food matrix) of the food that we eat. Free sugar excludes only sugars naturally occurring in intact fruits, vegetables, or dairy products.⁸

29. Scientific evidence demonstrates free sugars act in a physiologically identical manner to added sugars. Because free sugar is not encased in the food matrix (including being bound in fiber), it hits the bloodstream very quickly when consumed. Accordingly, organizations like the WHO strongly recommend “limiting the consumption of foods and drinks containing high amounts of sugars and sugar-sweetened beverages (i.e. all types of beverages containing free sugars – these include carbonated or non-carbonated soft drinks, fruit or vegetable juices and drinks).”⁹

30. “Added sugar” is a subset of free sugar that includes sugar added to foods during processing or preparation, such as brown sugar, sucrose, honey, invert sugar, molasses, and fruit juice concentrates. But under some definitions (as relevant here), “added sugar” does not include the sugar in fruit juice. Thus,

⁵ <https://www.facebook.com/drinkpoppi/videos/su-she-talks-allisonellsworth-founder-drinkpoppiwere-kicking-off-this-months-su-/1428455757573439>.

⁶ https://www.youtube.com/watch?v=Me-_h20gk5s.

⁷ <https://cdn.who.int/media/docs/librariesprovider2/euro-health-topics/obesity/sugars-factsheet.pdf>.

⁸ *Id.*

⁹ <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>.

1 added sugars are a subset of free sugars, meaning all added sugars are free sugars, though not all free sugars
2 are added sugars.

3 31. This definitional distinction, however, is merely semantical. “The existence of these different
4 ways of classifying sugars in foods and beverages in authoritative dietary guidance and nutrition
5 communication implies that the distinctions are deemed to be physiologically relevant. But physiologic
6 differentiation between these classes [of sugars] arise[s] mainly from effects of the [food] matrix in which
7 the sugars are found. For example, it has often been shown that the acute metabolic impact is lower . . . for
8 intact fruit than for the comparable fruit juices, the latter having effects more similar to other sugar-
9 sweetened beverages (SSBs).”¹⁰

10 32. The food matrix is “the nutrient and non-nutrient components of foods and their molecular
11 relationships, i.e., chemical bonds, to each other.”¹¹ The food matrix may be viewed as a physical domain
12 that contains and/or interacts with specific constituents of a food (e.g., a nutrient) providing functionalities
13 and behaviors which are different from those exhibited by the components in isolation or a free state. It is,
14 quite literally, the physical geometry of the food.¹² The effect of the food matrix (sometimes called the “FM-
15 effect”) has profound implications in food processing, oral processing, satiation, and satiety, and, most
16 relevant here, digestion in the gastrointestinal tract.¹³

17 33. All of the sugar in SSBs are free sugars. Poppi is an SSB and all of the sugars in Poppi are
18 free sugars.

19 34. Although, as with Poppi, “[sugar sweetened] beverages are often fortified with added
20 nutrients that are advertised as providing health benefits,” in reality, “the sugar content and potential adverse
21 effects of some additives outweigh any potential benefit these ingredients may provide, especially among
22

23
24 ¹⁰ Mela, David J. et al., *Perspective: Total, Added, or Free? What Kind of Sugars Should We Be Talking About?*, ADV. NUTR. 9(2): 63-69 (Apr. 7, 2018) [hereinafter “Mela, Sugar Perspective”].

25 ¹¹ United States Department of Agriculture, NAL Agricultural Thesaurus, *available at*
26 <https://lod.nal.usda.gov/nalt/17238>.

27 ¹² Aguilera, J., *The food matrix: implications in processing, nutrition and health*, CRIT. REV. FOOD SCI. NUTR.
28 2019; 59(22) 3612-3629 (Sept. 10, 2018).

¹³ *Id.*

youth.”¹⁴ Accordingly, “[l]imiting SSBs has been widely promulgated by public health policy and scientific documents as a prudent strategy for promoting optimal nutrition and health.”¹⁵ A review of the scientific record demonstrates why this is so.

B. FA Sugar Consumption Harms Digestive Health

1. The FA Sugar in Poppi Harms the Gut Microbiota

35. Diet plays a central role in shaping the microbiota that make up the gut biome in human digestive tracts. In fact, studies “suggest that diet has a dominant role over other possible variables such as ethnicity, sanitation, hygiene, geography, and climate, in shaping the gut microbiota.”¹⁶

36. Studies also show that certain types of nutrients have specific effects on the gut microbiota. Relevant here, “diets rich in simple sugars favor the expansion of [harmful microbial] organisms” in at least four separate ways.¹⁷ First, simple sugars serve as a nutrient for harmful bacteria and “[r]ecent studies have shown that high intake of sugars increase the relative abundance of [harmful] Proteobacteria in the gut, while simultaneously decreasing the abundance of [beneficial] Bacteroidetes.”¹⁸ Second, high-sugar diets result in

¹⁴ Pirotin S., Becker C., Crawford PB, “Looking beyond the marketing claims of new beverages: Health risks of consuming sport drinks, energy drinks, fortified waters and other flavored beverages,” Atkins Center for Weight and Health, UC Berkeley (2014), *available at* <https://search.issuelab.org/resources/18583/18583.pdf>.

¹⁵ Miaobing Zheng et al., *Substitution of SSB with other beverage alternatives*, J. ACAD. NUTR DIET. 115(5):767-779 (2015).

¹⁶ Carlotta De Filippo et al., *Impact of diet in shaping gut microbiota revealed by a comparative study in children from Europe and rural Africa*, PNAS, Vol. 107, No. 33, 14691-14696 (Aug. 17, 2010); *see also* Kirsty Brown et al., *Diet-Induced Dysbiosis of the Intestinal Microbiota and the Effects on Immunity and Disease*, NUTRIENTS 4, 1095-1119 (2012) [hereafter “Brown, Diet-Induced Dysbiosis of the Intestinal Microbiota”] (“the composition of the gut microbiota strongly correlates with diet as demonstrated by a study assessing the relative contributions of host genetics and diet in shaping the gut microbiota” and “dietary changes could explain 57% of the total structural variation in gut microbiota whereas changes in genetics accounted for no more than 12%. This indicates that diet has a dominating role in shaping gut microbiota”).

¹⁷ Guy E. Townsend II et al., *Dietary sugar silences a colonization factor in a mammalian gut symbiont*, PNAS, Vol. 116, No. 1, 233-238 (January 2, 2019) [hereinafter “Townsend II, Dietary sugar silences a colonization factor”].

¹⁸ Reetta Satokari, *High Intake of Sugar and the Balance between Pro- and Anti-Inflammatory Gut Bacteria*, NUTRIENTS 12(5), 1348 (published online May 8, 2020) [hereinafter “Satokari, High Intake of Sugar”].

“lost gut microbial diversity.”¹⁹ Third, because consuming sugar increases bile output, “[r]efined sugars,” also “mediate the overgrowth of opportunistic[, harmful] bacteria like *C. difficile* and *C. perfringens*,”²⁰ which feed on the bile. Fourth, sugar “can impact gut colonization by the microbiota independently of their ability to serve as nutrients” since both “fructose and glucose silence a critical colonization factor, called Roc, in a widely distributed gut commensal bacterium *B. thetaiotaomicron*.”²¹

37. These changes in the gut microbiota composition harm digestive health and increase risk of chronic digestive tract conditions. Specifically, “[e]vidence suggests that the composition of the intestinal microbiota can influence susceptibility to chronic disease of the intestinal tract including ulcerative colitis, Crohn’s disease, celiac disease and irritable bowel syndrome”²²

38. In sum, “high sugar intake may stagger the balance of microbiota to have increased pro-inflammatory properties and decreased [] capacity to regulate epithelial integrity and mucosal immunity. Consequently, high dietary sugar can, through the modulation of microbiota, promote metabolic endotoxemia, systemic (low grade) inflammation and the development of metabolic dysregulation and thereby, high dietary sugar may have many-fold deleterious health effects, in addition to providing excess energy.”²³

¹⁹ Moon Ho Do et al., *High-Glucose or -Fructose Diet Cause Changes of the Gut Microbiota and Metabolic Disorders in Mice without Body Weight Change*, NUTRIENTS 2018, 10, 761 (June 13, 2018) [hereinafter “Ho Do, High-Glucose or -Fructose Diet Cause Changes of the Gut Microbiota and Metabolic Disorders ”]; see also Jian-Mei Li, et al., *Dietary fructose-induced gut dysbiosis promotes mouse hippocampal neuroinflammation: a benefit of short-chain fatty acids*, MICROBIOME, 7, Article No. 98 (June 29, 2019) (“The abundance of Bacteroidetes was significantly decreased and Proteobacteria was significantly increased in fructose-fed mice”) [hereinafter “Jian-Mei Li, Dietary fructose-induced gut dysbiosis”].

²⁰ Brown, Diet-Induced Dysbiosis of the Intestinal Microbiota, *supra* n.16.

²¹ Townsend II, Dietary sugar silences a colonization factor, *supra* n.17 (“dietary simple sugars can suppress gut colonization in a commensal bacterium just by altering the levels of a colonization factor [know as Roc] dispensable for the utilization of such sugars.”).

²² Brown, Diet-Induced Dysbiosis of the Intestinal Microbiota, *supra* n.16.

²³ Satokari, High Intake of Sugar, *supra* n.18.

2. The FA Sugar in Poppi Harms the Gut Barrier

39. “The gut barrier consists of a specialized, semi-permeable mucosal, and epithelial cell layers that are reinforced by tight junction proteins. Among other functions, this barrier serves to regulate nutrient and water entry and prevents the entry of harmful compounds into extra-luminal tissues” and the blood.²⁴

40. When the permeability of the gut or epithelial barrier is increased, this “allows for the influx of adverse substances and may ultimately contribute to the development of metabolic disorders, and cognitive dysfunction.”²⁵

41. “A compromised gut barrier makes the intestinal tract potentially vulnerable to the gram-negative bacteria-derived LPS, which upon excess entry into circulation promotes endotoxemia and systemic inflammation.”²⁶

42. Both fructose and glucose increase gut barrier permeability.

43. First, “[a]lthough dietary fructose was thought to be metabolized exclusively in the liver, evidence has emerged that it is also metabolized in the small intestine and leads to intestinal epithelial barrier deterioration.”²⁷ A high fructose diet, for example, has been found to result in the “thinning of the intestinal mucosa, epithelium, and muscularis mucosae,” and the “loss of crypts and glands,” among other harmful effects.²⁸ This “increase[d] intestinal permeability” “precedes the development of metabolic endotoxemia, inflammation, and lipid accumulation, ultimately leading to hepatic steatosis and normal-weight obesity.”²⁹ In addition, “fructose can escape absorption in the small intestine and reach the microbiota in the distal gut,

²⁴ Emily E. Noble et al., *Gut to Brain Dysbiosis: Mechanisms Linking Western Diet Consumption, the Microbiome, and Cognitive Impairment*, FRONT BEHAV. NEUROSCI. 11:9 (published online January 30, 2017).

²⁵ *Id.*

²⁶ *Id.* (Studies have found “elevated plasma levels of a gavage fluorescent molecule (FITC-dextran) that is typically unable to cross the gut barrier.”).

²⁷ Mark A Febbraio et al., “*Sweet death*”: Fructose as a metabolic toxin that targets the gut-liver axis, CELL METAB. 7;33(12):2316-2328 (published online Oct. 6, 2021) [hereinafter “Febbraio, Fructose as a metabolic toxin that targets the gut-liver axis”].

²⁸ Jian-Mei Li, Dietary fructose-induced gut dysbiosis, *supra* n.19.

²⁹ Ho Do, High-Glucose or -Fructose Diet Cause Changes of the Gut Microbiota and Metabolic Disorders, *supra* n.19.

where microbiota-derived products of fructose metabolism enter the host blood.”³⁰ Thus, “excessive fructose consumption” has been shown to “result[] in barrier deterioration, dysbiosis, low-grade intestinal inflammation, and endotoxemia.”³¹ In short, consuming fructose, like that in the Ensure Nutrition Drinks, has numerous harmful effects on the gut barrier.³²

44. Glucose also harms the gut barrier. For example, both a “[high glucose diet] and [high fructose diet] increased gut permeability and disrupted the gut barrier.”³³ This harms digestive tract health because “damaged gut barriers” lead to endotoxins crossing the epithelial and into the blood stream, resulting in “higher [blood] plasma endotoxin levels.”³⁴

45. Moreover, high levels of glucose in the blood, known as “[h]yperglycemia[,] markedly interfere[s] with homeostatic epithelial integrity, leading to abnormal influx of immune-stimulatory microbial products and a propensity for systemic spread of enteric pathogens.”³⁵ This happens, at least in part, because “hyperglycemia causes retrograde transport of glucose into intestinal epithelial cells via GLUT2, followed by alterations in intracellular glucose metabolism and transcriptional reprogramming.”³⁶

³⁰ Townsend II, Dietary sugar silences a colonization factor, *supra* n.17.

³¹ Febbraio, Fructose as a metabolic toxin that targets the gut-liver axis, *supra* n.27.

³² See Satokari, High Intake of Sugar, *supra* n.18 (“consuming high amounts of sugar harms the gut by “increasing small intestinal permeability in healthy humans,”); Ho Do, High-Glucose or -Fructose Diet Cause Changes of the Gut Microbiota and Metabolic Disorders, *supra* n.19 (“diet induced changes in the gut microbiota affect the expression of tight junction proteins and inflammatory cytokines, which leads to increased gut permeability and inflammation”); Febbraio, Fructose as a metabolic toxin that targets the gut-liver axis, *supra* n.27 (“fructose, . . . led to the downregulation of enterocyte tight-junction proteins and subsequent barrier deterioration, which is in agreement with previous rodents and human studies (Jin et al., 2014; Kavanagh et al., 2013; Lambert et al., 2017; Spruss et al., 2012).”); Young-Eun Cho et al., *Fructose Promotes Leaky Gut, Endotoxemia, and Liver Fibrosis Through Ethanol-Inducible Cytochrome P450-2E1-Mediated Oxidative and Nitrative Stress*, HEPATOLOGY, Vol. 73, Issue 6, June 2021, 2180-2195 (April 8, 2019) (“fructose intake causes protein nitration of intestinal [tight-junction] and AJ proteins, resulting in increased gut leakiness, endotoxemia, and steatohepatitis with liver fibrosis”).

³³ Ho Do, High-Glucose or -Fructose Diet Cause Changes of the Gut Microbiota and Metabolic Disorders, *supra* n.19.

³⁴ *Id.*

³⁵ Christop A Thaïss et al., *Hyperglycemia drives intestinal barrier dysfunction and risk for enteric infection*, SCIENCE 359, 1376–1383 (Mar. 23, 2018) (“We have identified glucose as an orchestrator of intestinal barrier function.”).

³⁶ *Id.*

1 In short, “experiments establish hyperglycemia as a direct and specific cause for intestinal barrier dysfunction
2 and susceptibility to enteric infection,”³⁷ such that “[b]lood glucose concentrations are associated with
3 microbial product influx in humans[.]”³⁸

4 46. Because consuming “[s]ugar has [] been shown to irritate the lining of the stomach and
5 intestine,” it actually “compromises digestive function and the absorption of nutrients” and can “induce
6 diarrhoea [sic], which may lead to further loss of nutrients.”³⁹

7 **C. FA Sugar Consumption Impairs the Immune System**

8 47. The scientific literature demonstrates that consumption of sugar-sweetened beverages has
9 deleterious effects on immune system function.

10 48. First, neutrophils are the most common type of white blood cell (leukocytes) and they act as
11 the immune system’s first line of defense. Neutrophils ordinarily protect the body by traveling to the source
12 of an infection or pathogen where they digest and destroy invading microorganism. But consuming sugar-
13 sweetened beverages like the challenged Ensure Products causes blood sugar to rise quickly. This in turn
14 activates an enzyme called protein kinase C, which leads to dysfunction in neutrophils significantly reducing
15 the ability of this important part of the immune system to protect the body and fight off infection.⁴⁰

16 49. Second, high blood sugar is associated with the inability of immune cells to properly “tag”
17 foreign pathogens so they can be destroyed.⁴¹

18 50. Third, high blood sugar contributes to multiple defective immune responses, including a
19 decrease in IL-6, a chemical messenger necessary for a proper immune response.⁴²

20 ³⁷ *Id.*

21 ³⁸ *Id.* (Human studies “suggest that similar to their effects in mice, serum glucose concentrations, rather than
22 obesity, may associate with or potentially even drive intestinal barrier dysfunction in humans.”).

23 ³⁹ James J DiNicolantonio & Amy Berger, *Added sugars drive nutrient and energy deficit in obesity: a new*
24 *paradigm*, OPEN HEART (2016).

25 ⁴⁰ Nagham Jafar et al., *The Effect of Short-Term Hyperglycemia on the Innate Immune System*, AM. J. MED.
SCI. Vol. 351(2), 201-211 (Feb. 2016).

26 ⁴¹ Margaret K. Hostetter, *Handicaps to Host Defense: Effects of Hyperglycemia on C3 and Candida albicans*,
27 DIABETES 1; 39 (3): 271-75 (Mar. 1990).

28 ⁴² Matthew P Spindler et al., *Acute hyperglycemia impairs IL-6 expression in humans*, IMMUN. INFLAMM.
DIS. 19;4(1):91-7 (Jan. 2016).

D. FA Sugar Consumption is Associated with Increased Risk of Cardiovascular Heart Disease

51. The scientific literature demonstrates that consumption of sugar-sweetened beverages has deleterious effects on heart health.

52. In a study of preschool children published in January 2020, researchers found that higher consumption of sugar-containing beverages was significantly associated with elevated CMR (cardiometabolic risk) scores. The researchers stated that their “findings support recommendations to limit overall intake of SCB in early childhood, in [an] effort to reduce the potential long-term burden of CMR.”⁴³

53. Data obtained from NHANES surveys demonstrate that adults who consumed 10% - 24.9% of their calories from added sugar had a 30% greater risk of cardiovascular disease (CVD) mortality than those who consumed 5% or less of their calories from added sugar. In addition, those who consumed 25% or more of their calories from added sugar had an average 275% greater risk of CVD mortality than those who consumed less than 5% of calories from added sugar. Thus, “[t]he risk of CVD mortality increased exponentially with increasing usual percentage of calories from added sugar[.]”⁴⁴ The NHANES analysis also found “a significant association between sugar-sweetened beverage consumption and risk of CVD mortality,” with an average 29% greater risk of CVD mortality “when comparing participants who consumed 7 or more servings/wk . . . with those who consumed 1 serving/wk or less”⁴⁵

54. In another prospective cohort study, consumption of sugary beverages was significantly shown to increase risk of CHD, as well as adverse changes in some blood lipids, inflammatory factors, and leptin.⁴⁶

⁴³ Karen M Eny et al., *Sugar-containing beverage consumption and cardiometabolic risk in preschool children*, PREV. MED. REPORTS 17 (Jan. 14, 2020).

⁴⁴ Quanhe Yang et al., *Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults*, JAMA, at E4-5 (pub. online, Feb. 3, 2014).

⁴⁵ *Id.* at E6.

⁴⁶ Lawrence de Koning et al., *Sweetened beverage consumption, incident coronary heart disease, and biomarkers of risk in men*, CIRCULATION, Vol. 125, pp. 1735-41 (2012).

55. Sugar-sweetened beverage consumption is also associated with several CHD risk factors. For example, consumption of sugary beverages has been associated with dyslipidemia,⁴⁷ obesity,⁴⁸ and increased blood pressure.⁴⁹

E. FA Sugar Consumption is Associated with Increased Risk of Obesity

56. Excess added sugar consumption leads to weight gain and obesity because insulin secreted in response to sugar intake instructs the cells to store excess energy as fat. This excess weight can then exacerbate the problems of excess added sugar consumption, because excess fat, particularly around the waist, is in itself a primary cause of insulin resistance, another vicious cycle. Studies have shown that belly fat produces hormones and other substances that can cause insulin resistance, high blood pressure, abnormal cholesterol levels, and cardiovascular disease. And belly fat plays a part in the development of chronic inflammation in the body, which can cause damage over time, and without any signs or symptoms.

57. A meta-analysis by Harvard researchers evaluating change in Body Mass Index per increase in 1 serving of sugar-sweetened beverages per day found a significant positive association between beverage intake and weight gain.⁵⁰

⁴⁷ Sharon S Elliott et al., *Fructose, weight gain, and the insulin resistance syndrome*, AM. J. CLIN. NUTR., Vol. 76, No. 5, pp. 911-22 (2002).

⁴⁸ Myles S Faith et al., *Fruit Juice Intake Predicts Increased Adiposity Gain in Children From Low-Income Families: Weight Status-by-Environment Interaction*, PEDIATRICS, Vol. 118 (2006) (“Among children who were initially either at risk for overweight or overweight, increased fruit juice intake was associated with excess adiposity gain, whereas parental offerings of whole fruits were associated with reduced adiposity gain.”); Matthias B Schulze et al., *Sugar-Sweetened Beverages, Weight Gain, and Incidence of Type 2 Diabetes in Young and Middle-Aged Women*, JAMA, Vol. 292, No. 8, pp. 927-34 (2004) [hereinafter “Schulze, Diabetes in Young & Middle-Aged Women”]; Dr. David S Ludwig et al., *Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis*, LANCET, Vol. 257, pp. 505-508 (2001); B A Dennison et al., *Excess fruit juice consumption by preschool-aged children is associated with short stature and obesity*, PEDIATRICS, Vol. 99, pp. 15-22 (1997).

⁴⁹ Erin Hoare et al., *Sugar- and Intense-Sweetened Drinks in Australia: A Systematic Review on Cardiometabolic Risk*, NUTRIENTS, Vol. 9, No. 10 (2017).

⁵⁰ Vasanti S Malik et al., *Sugar-sweetened beverages and BMI in children and adolescents: reanalyses of a meta-analysis*, AM. J. CLIN. NUTR., Vol. 29, 438-39 (2009).

58. One study of more than 2,000 2.5-year-old children followed for three years found that those who regularly consumed sugar-sweetened beverages between meals had a 240% better chance of being overweight than non-consumers.⁵¹

59. An analysis of data for more than 50,000 women from the Nurses' Health Study during two 4-year periods showed that weight gain over a 4-year period was highest among women who increased their sugar-sweetened beverage consumption from 1 or fewer drinks per week, to 1 or more drinks per day (8.0 kg gain during the 2 periods), and smallest among women who decreased their consumption or maintained a low intake level (2.8 kg gain).⁵²

60. A study of more than 40,000 African American women over 10 years had similar results. After adjusting for confounding factors, those who increased sugar-sweetened beverage intake from less than 1 serving per week, to more than 1 serving per day, gained the most weight (6.8 kg), while women who decreased their intake gained the least (4.1 kg).⁵³

61. Experimental short-term feeding studies comparing sugar-sweetened beverages to artificially-sweetened beverages have shown that consumption of the former leads to greater weight gain. In one 10-week trial involving more than 40 men and women, the group that consumed daily supplements of sucrose (for 28% of total energy) increased body weight and fat mass—by 1.6 kg for men and 1.3 kg for women—while the group that was supplemented with artificial sweeteners lost weight—1.0 kg for men and 0.3 kg for women.⁵⁴

⁵¹ Lise Dubois et al., *Regular sugar-sweetened beverage consumption between meals increases risk of overweight among preschool-aged children*, J. AM. DIETETIC ASSOC., Vol. 107, Issue 6, 924-34 (2007).

⁵² Schulze, *Diabetes in Young & Middle-Aged Women*, *supra* n.48.

⁵³ Julie R Palmer et al., *Sugar-Sweetened Beverages and Incidence of Type 2 Diabetes Mellitus in African American Women*, ARCH INTERN MED., Vol. 168, No. 14, 1487-82 (July 28, 2008).

⁵⁴ Anne Raben et al., *Sucrose compared with artificial sweeteners: different effects on ad libitum food intake and body weight after 10 wk of supplementation in overweight subjects*, AM. J. CLINI. NUTR., Vol. 76, 721-29 (2002).

F. FA Sugar Consumption Increases Risk of Metabolic Disease

62. Metabolic syndrome is a group of conditions that together raise the risk of type 2 diabetes, cardiovascular disease, obesity, polycystic ovary syndrome, nonalcoholic fatty liver disease, and chronic kidney disease. Metabolic syndrome is defined as the presence of any three of the following:

- a. Large waist size (35" or more for women, 40" or more for men);
- b. High triglycerides (150mg/dL or higher, or use of cholesterol medication);
- c. High total cholesterol, or HDL levels under 50mg/dL for women, and 40 mg for men;
- d. High blood pressure (135/85 mm or higher); and
- e. High blood sugar (100mg/dL or higher).

63. More generally, "metabolic abnormalities that are typical of the so-called metabolic syndrome . . . includ[e] insulin resistance, impaired glucose tolerance, high concentrations of circulating triacylglycerols, low concentrations of HDLs, and high concentrations of small, dense LDLs."⁵⁵

64. About 1 in 3 adults in the United States have metabolic syndrome, placing them at higher risk for chronic disease.⁵⁶

65. Defining "metabolic health" as having optimal levels of waist circumference (WC <102/88 cm for men/women), glucose (fasting glucose <100 mg/dL and hemoglobin A1c <5.7%), blood pressure (systolic <120 and diastolic <80 mmHg), triglycerides (<150 mg/dL), and high-density lipoprotein cholesterol (\geq 40/50 mg/dL for men/women), and not taking any related medication, data from the NHANES Survey 2009-2016 showed prevalence of "metabolic health" in American adults is alarmingly low, even in normal weight individuals.⁵⁷

66. Excess consumption of added sugar leads to metabolic syndrome by stressing and damaging crucial organs, including the pancreas and liver. When the pancreas, which produces insulin, becomes overworked, it can fail to regulate blood sugar properly. Large doses of added sugar can overwhelm the

⁵⁵ Susan K. Fried & Salome P. Rao, *Sugars, hypertriglyceridemia, and cardiovascular disease*, AM. J. CLIN. NUTR., Vol. 78 (suppl.), 873S-80S, at 873S (2003).

⁵⁶ See <https://www.nhlbi.nih.gov/health/metabolic-syndrome> (last updated May 18, 2022).

⁵⁷ Joana Araújo et al., *Prevalence of Optimal Metabolic Health in American Adults: National Health and Nutrition Examination Survey 2009-2016*, METAB. SYNDR. RELAT. DISORD. (2019).

1 liver, which metabolizes the fructose in the sugar. In the process, the liver will convert excess fructose to
2 fat, which is stored in the liver and released into the bloodstream. This process contributes to key elements
3 of metabolic syndrome, including high blood fats and triglycerides, high cholesterol, high blood pressure,
4 and extra body fat, especially in the belly.⁵⁸

5 67. In 2016, researchers conducted a study to determine whether the detrimental effects of
6 dietary sugar were due to extremely high dosing, excess calories, or because of its effects on weight gain,
7 rather than caused by sugar consumption directly.⁵⁹ In other words, the researchers dissociated the metabolic
8 effects of dietary sugar from its calories and effects on weight gain.

9 68. Because the researchers did not want to *give* subjects sugar to see if they got sick, they instead
10 took sugar away from people who were already sick to see if they got well. But if subjects lost weight, critics
11 would argue that the drop in calories or weight loss was the reason for the clinical improvement. Therefore,
12 the researchers designed the study to be isocaloric, by giving back to subjects the same number of calories
13 in starch that were taken away in sugar. The study involved 43 children, ages 8 to 19, each obese with at
14 least one other co-morbidity demonstrating metabolic problems. All were high consumers of added sugar
15 in their diets.⁶⁰

16 69. To perform the study, researchers assessed subjects' home diets by two questionnaires to
17 determine how many calories, and how much fat, protein, and carbohydrate they were eating. Subjects were
18 then tested at a hospital based on their home diets. Then, for the next 9 days, researchers catered the subjects'
19 meals. The macronutrient percentages of fat, protein, and carbohydrate were not changed. Subjects were fed
20 the same calories and percent of each macronutrient as their home diet; but within the carbohydrate fraction,
21 researchers took the added sugar out, and substituted starch. For example, researchers took pastries out, and
22 put bagels in; took yogurt out, and put baked potato chips in; took chicken teriyaki out, and put turkey hot
23 dogs in (although subjects were still given whole fruit). Researchers reduced subjects' dietary sugar
24

25 ⁵⁸ Lisa Te Morenga et al., *Dietary sugars and body weight: systematic review and meta-analyses of*
26 *randomized controlled trials and cohort studies*, BJM (2012).

27 ⁵⁹ Robert H Lustig et al., *Isocaloric fructose restriction and metabolic improvement in children with obesity*
28 *and metabolic syndrome*, OBESITY (SILVER SPRING), Vol. 24, No. 2, 453-60 (Feb. 2016).

⁶⁰ See *id.* at 453-54.

consumption from 28% to 10% of calories. Researchers also gave subjects a scale to take home, and each day they would weigh themselves. If they were losing weight, they were instructed to eat more. The goal was for subjects to remain weight-stable over the 10 days of study. On the final day, subjects came back to the hospital for testing on their experimental low-added sugar diet. The study team analyzed the pre- and post-data in a blinded fashion so as not to introduce bias.⁶¹

70. Researchers analyzed three types of data. First, diastolic blood pressure decreased by 5 points. Second, baseline blood levels of analytes associated with metabolic disease, such as lipids, liver function tests, and lactate (a measure of metabolic performance) all improved significantly. Third, fasting glucose decreased by 5 points. Glucose tolerance improved markedly, and fasting insulin levels fell by 50%. Each of these results was highly-statistically-significant.⁶²

71. In sum, the study indicated that subjects improved their metabolic status in just 10 days, even while eating processed food, just by removing added sugar and substituting starch. The metabolic improvement, moreover, was unrelated to changes in weight or body fat.

G. FA Sugar Consumption Increases Risk of Type 2 Diabetes

72. Diabetes affects 37.3 million Americans (approximately 1 in 10), and 96 million American adults (more than 1 in 3) have prediabetes.⁶³ It can cause kidney failure, lower-limb amputation, and blindness. In addition, diabetes doubles the risk of colon and pancreatic cancers and is strongly associated with coronary artery disease and Alzheimer's disease.⁶⁴

73. Globally, countries where sugar consumption is highest have the highest rates of type 2 diabetes, while those with the lowest consumption have the lowest rates.⁶⁵ An econometric analysis of

⁶¹ See *id.* at 454-55.

⁶² See *id.* at 455-56.

⁶³ See <https://www.cdc.gov/diabetes/library/spotlights/diabetes-facts-stats.html>.

⁶⁴ Javier Aranceta Bartrina & Carmen Pérez Rodrigo, *Association between sucrose intake and cancer: a review of the evidence*, NUTR. HOSP., Vol. 28 (Suppl. 4), 95-105 (2013); Custodia García-Jiménez et al., *A new link between diabetes and cancer: enhanced WNT/beta-catenin signaling by high glucose*, J. MOL. ENDOCRINOL., Vol. 52, No. 1 (2014); Gerard J. Linden et al., *All-cause mortality and periodontitis in 60-70-year-old men: a prospective cohort study*, J. CLIN. PERIODONTAL., Vol. 39, No. 1, 940-46 (Oct. 2012).

⁶⁵ Praveen Weeratunga et al., *Per capita sugar consumption and prevalence of diabetes mellitus—global and regional associations*, BMC PUB. HEALTH, 2014 (Feb. 20, 2014).

repeated cross-sectional data published in 2013, for example, established a causal relationship between sugar availability and type 2 diabetes. After adjusting for a wide range of confounding factors, researchers found that an increase of 150 calories per day related to an insignificant 0.1% rise in diabetes prevalence by country, while an increase of 150 calories per day in sugar related to a 1.1% rise in diabetes prevalence by country, a statistically significant 11-fold difference.⁶⁶

74. The link between sugar intake and diabetes still holds even after controlling for total calorie intake, body weight, alcohol consumption and exercise.⁶⁷

H. FA Sugar Consumption Increases Risk of Liver Disease

75. Added sugar consumption causes serious liver disease, including non-alcoholic fatty liver disease (NAFLD), characterized by excess fat build-up in the liver. Five percent of these cases develop into non-alcoholic steatohepatitis (NASH), scarring as the liver tries to heal its injuries, which gradually cuts off vital blood flow to the liver. About 25% of NASH patients progress to non-alcoholic liver cirrhosis, which requires a liver transplant or can lead to death.⁶⁸

76. Since 1980, the incidence of NAFLD and NASH has doubled, along with the rise of fructose consumption, with approximately 6 million Americans estimated to have progressed to NASH and 600,000 to Nash-related cirrhosis. Most people with NASH also have type 2 diabetes. NASH is now the third-leading reason for liver transplant in America.⁶⁹

⁶⁶ Sanjay Basu et al., *The Relationship of Sugar to Population-Level Diabetes Prevalence: An Econometric Analysis of Repeated Cross-Sectional Data*, PLOS ONLINE, Vol. 8, Issue 2 (Feb. 27, 2013) [hereinafter “Basu, *The Relationship*”].

⁶⁷ *Id.*

⁶⁸ Geoffrey C. Farrell & Claire Z. Larter, *Nonalcoholic fatty liver disease: from steatosis to cirrhosis*, HEPATOLOGY, Vol. 433, No. 2 (Suppl. 1), S99-S112 (Feb. 2006); EE Powell et al., *The natural history of nonalcoholic steatohepatitis: a follow-up study of forty-two patients for up to 21 years*, HEPATOLOGY, Vol. 11, No. 1 (1990).

⁶⁹ Michael C. Charlton et al., *Frequency and outcomes of liver transplantation for nonalcoholic steatohepatitis in the United States*, GASTROENTEROLOGY, Vol. 141, No. 4, 1249-53 (Oct. 2011).

77. Moreover, because the liver metabolizes sugar virtually identically to alcohol, the U.S. is now seeing—for the first time—alcohol-related diseases in children. Conservative estimates are that 31% of American adults, and 13% of American children suffer from NAFLD.⁷⁰

I. Because of the Scientific Evidence of FA Sugar’s Health Harms, Authoritative Bodies Recommend Excluding or Substantially Minimizing FA Sugar Consumption, Especially in the Form of SSBs

78. The World Health Organization (WHO) recommends that no more than 10% of calories, and ideally less than 5%, come from FA Sugar.⁷¹ Additionally, WHO expressly advises “limiting the consumption of . . . sugar-sweetened beverages (i.e. all types of beverages containing free sugars – these include carbonated or non-carbonated soft drinks, fruit or vegetable juices and drinks . . .)”⁷²

79. The American Heart Association (AHA) recommends restricting added sugar to 5% of calories consumed per day.⁷³ Based on the average caloric needs, this equates to 12 grams daily for children 4 to 8 years old, 25 grams daily for children 9 to 18 years old, 25 grams for women, and 38 grams for men.

80. The Food and Drug Administration (FDA) has adopted the United States Department of Agriculture’s daily reference value (DRV) of 50 grams of added sugar, or 10% of calories based on a 2,000-calorie diet. 81 Fed. Reg. 33742, 33820 (May 27, 2016). While the FDA acknowledged the AHA and WHO recommendations to keep added sugars below 5% of calories, it set the DRV at 50 grams or 10% because this was “more realistic considering current consumption of added sugars in the United States as well as

⁷⁰ Sarah M. Lindbäck et al., *Pediatric nonalcoholic fatty liver disease: a comprehensive review*, ADV. PEDIATR., Vol. 57, No. 1, 85-140 (2010); Mariana Lazo & Jeanna M Clark, *The epidemiology of nonalcoholic fatty liver disease: a global perspective*, SEMIN. LIVER DIS., Vol. 28, No. 4, 339-50 (2008); Jeffrey B Schwimmer et al., *Prevalence of Fatty Liver in Children and Adolescents*, PEDIATRICS, Vol. 118, No. 4, 1388-93 (2006); Jeffrey D Browning et al., *Prevalence of hepatic steatosis in an urban population in the United States: impact of ethnicity*, HEPATOLOGY, Vol. 40, No. 6, 1387-95 (2004).

⁷¹ World Health Organization, “Healthy Diet,” available at <https://www.who.int/news-room/fact-sheets/detail/healthy-diet> (reduction of FA Sugar “to below 5% . . . per day would provide additional health benefits).

⁷² *Id.*

⁷³ Johnson, R.K., et al., on behalf of the American Heart Association Nutrition Committee of the Council on Nutrition, Physical Activity, and Metabolism and Council on Epidemiology and Prevention, *Dietary Sugars Intake and Cardiovascular Health: A Scientific Statement From the American Heart Association*, CIRCULATION, Vol. 120, 1011-20, at 1016-17 (2009).

added sugars in the food supply.” *Id.* at 33,849. Nevertheless, the FDA’s rulemaking was based, in part, on the 2015 Dietary Guidelines Advisory Committee’s “food pattern analysis,” which—consistent with the AHA and WHO recommendations—“demonstrate[d] that when added sugars in foods and beverages exceeds 3% to 9% of total calories . . . a healthful food pattern may be difficult to achieve”⁷⁴

81. The FDA recently published a proposed rule “to update the definition for the implied nutrient content claim ‘healthy’ to be consistent with current nutrition science and Federal dietary guidance, especially the Dietary Guidelines for Americans (Dietary Guidelines), regarding how consumers can maintain healthy dietary practices.”⁷⁵ In doing so, the FDA explained, “[e]vidence shows” that “a diet low in added sugars helps individuals achieve a healthy dietary pattern” such that “it is critical that foods” labeled as “‘healthy’ do not contribute to a dietary pattern that contains added sugars over the recommended levels.”⁷⁶

82. In order to achieve this, the FDA has proposed “a limit on the amount of added sugars in foods bearing the nutrient content claim ‘healthy’ to help consumers choose foods that will contribute to a healthy dietary pattern that is lower in added sugars, consistent with current nutrition science and Federal dietary guidance.”⁷⁷ That limit, “[f]or individual foods,” was found to be “≤5 percent of the DV [for added sugar] per [Reference Amount Customarily Consumed],” which is “≤2 ½ g for adults and children 4 years of age and older[.]”⁷⁸ In sum, FDA has concluded the scientific evidence supports limiting added sugar to just 5% of calories, or 2.5 grams, in individual foods marketed as healthy due to their nutrient content.

83. The Heart and Stroke Foundation, in explaining “healthy eating basics,” recommends “avoid[ing] sugary drinks.”⁷⁹

84. The Centers for Disease Control and Prevention warns that “[t]oo much sugar in your diet can

⁷⁴ U.S. Department of Agriculture, “Scientific Report of the 2015 Dietary Guidelines Advisory Committee,” Ch. 6 p.26 (February 2015).

⁷⁵ 87 Fed. Reg. 59168, 59168 (Sept. 29, 2022).

⁷⁶ *Id.* at 59180.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ Heart and Stroke Foundation, “Healthy eating basics,” <https://www.heartandstroke.ca/healthy-living/healthy-eating/healthy-eating-basics>.

lead to health problems such as weight gain and obesity, type 2 diabetes, and heart disease” and that “[s]ugary drinks are the leading source of added sugars in the American diet.”⁸⁰

85. The Harvard School of Public Health points out that “the Healthy Eating Pyramid says sugary drinks and sweets should be used sparingly, if at all, and the Healthy Eating Plate does not include foods with added sugars.”⁸¹

86. In September 2019, the American Academy of Pediatrics, the American Heart Association, the Academy of Nutrition and Dietetics, and the American Academy of Pediatric Dentistry published a consensus statement on young children’s consumption of drinks, recommending no SSBs for children age 5 and under.⁸²

87. Overall, “[l]imiting SSBs has been widely promulgated by public health policy and scientific documents as a prudent strategy for promoting optimal nutrition and health.”⁸³

IV. THE TYPE AND AMOUNT OF DIETARY FIBER IN POPPI DOES NOT PROVIDE THE ADVERTISED GUT HEALTH BENEFITS

88. Poppi claims to be a prebiotic soda based on its inclusion of agave inulin, a type of natural soluble fiber extracted from the agave plant.⁸⁴

89. Although in recent years, prebiotic supplements have gained popularity, “experts advise opting for fibrous foods over supplements to meet your microbiome’s probiotic requirements. This preference is rooted in the fact that foods offer a diverse array of fiber types, whereas supplements

⁸⁰ Centers for Disease Control and Prevention, “Know Your Limit for Added Sugars,” *CDC.gov*, https://www.cdc.gov/healthyweight/healthy_eating/sugar.html.

⁸¹ Harvard T.H. Chan School of Public Health, “Added Sugar,” *The Nutrition Source*, <https://www.hsph.harvard.edu/nutritionsource/carbohydrates/added-sugar-in-the-diet>.

⁸² Lott, M., et al., “Healthy Beverage Consumption in Early Childhood: Recommendations from Key National Health and Nutrition Organizations. Consensus Statement,” *Healthy Eating Research* (Sept. 2019), <https://healthyeatingresearch.org/research/consensus-statement-healthy-beverage-consumption-in-early-childhood-recommendations-from-key-national-health-and-nutrition-organizations/>.

⁸³ Zheng, M., et al., *Substitution of SSB with other beverage alternatives: a review of long-term health outcomes*, J. ACAD. NUTR. DIET. vol. 115,5 (2015).

⁸⁴ <https://drinkpoppi.com/pages/benefits-101>.

commonly feature a single type. The consumption of a singular fiber type restricts the nutritional support available to our microbiome, and can limit overall diversity that is crucial for a healthy microbiome.”⁸⁵

90. This is because purified fibers that are added to foods are much simpler structures than fiber naturally found in plant foods, so they get fermented faster—by microbes that live near where the small intestine meets the large intestine—and are unlikely to reach the microbes living further down the large intestine (where any gut health benefits would occur).⁸⁶

91. Research on the prebiotics effects of agave inulin found no meaningful impact on the reliable markers of microbiome health, such as short-chain fatty acids and branched chain fatty acids, even when administered at 7.5 grams per day—3.75 times the amount in Poppi—over a period of three weeks.⁸⁷ The researchers concluded they “did not detect a significant treatment effect of agave inulin supplementation alone[.]”⁸⁸

92. Instead of providing gut health benefits, studies show that the consumption of inulin fiber can actually harm gut health.

93. For example, studies show that consuming as little as 2.5 grams of prebiotic supplements, including agave inulin, can lead to a build-up of gas, causing abdominal discomfort, while higher doses (40-50 grams per day) can cause diarrhea.⁸⁹

⁸⁵ Maya Shetty, BS, *Probiotics, Prebiotics, and Postbiotics: What Are They and Why Are They Important?* STANFORD UNIV.: LIFESTYLE MEDICINE (Apr. 8, 2024), <https://longevity.stanford.edu/lifestyle/2024/04/08/probiotics-prebiotics-and-postbiotics-what-are-they-and-why-are-they-important/>.

⁸⁶ Maria Godoy, *Prebiotic sodas promise to boost your gut health. here’s what to eat instead*, NPR.org (Aug. 8, 2023), <https://www.npr.org/sections/health-shots/2023/08/08/1192329196/gut-health-fiber-probiotic-olipop-poppi>.

⁸⁷ Valentina Vinelli, et al., *Effects of Dietary Fibers on Short-Chain Fatty Acids and Gut Microbiota Composition in Healthy Adults: A Systematic Review*, NUTRIENTS, Vol. 14, No. 13, 2559 (June 21, 2022).

⁸⁸ Hannah D. Holscher, et al., *Agave Inulin Supplementation Affects The Fecal Microbiota Of Healthy Adults Participating In A Randomized, Double-Blind, Placebo-Controlled, Crossover Trial*, THE J. OF NUTRITION, Vol. 145, No. 9, 2025-2032 (2015).

⁸⁹ Michele Pier Luca Guarino, et al. *Mechanisms of Action of Prebiotics and Their Effects on Gastro-Intestinal Disorders in Adults*, NUTRIENTS, Vol. 12, No. 4, 1037-39 (Apr. 2020); *see also* Holscher HD, et al., *Gastrointestinal tolerance and utilization of agave inulin by healthy adults*, FOOD FUNCT., Vol. 5, No. 6, 1142-49 (2014) (finding increases in flatulence, bloating, and abdominal pain among healthy individuals ingesting agave inulin).

94. One study found that consuming agave inulin over a long period of time can alter the gut's microenvironment, leading to immune system disruptions.⁹⁰

95. Another study found that an inulin based diet can lead to inflammation and liver damage at doses of 10 to 30 grams per day over a 3-week period.⁹¹ According to Dr. Mohammad Arifuzzaman, a postdoctoral associate at Weill Cornell Medicine, "foods with added [inulin] fiber[] stimulate[] microbes in the gut to release bile acids that increase the production of molecules that promote intestinal inflammation."⁹²

V. DEFENDANT'S REPRESENTATIONS AND OMISSIONS SUGGESTING POPPI IS BENEFICIAL FOR GUT AND OVERALL HEALTH ARE FALSE AND MISLEADING

96. Defendant markets the Products with labeling representations intended to appeal to consumers interested in health and wellness and intended to convince those consumers that the Products are healthy overall, and healthy for the gut. However, the Products—depending on flavor—contain up to 100% of their calories from FA Sugar. Because scientific evidence demonstrates that consuming SSBs, like the Products, harms overall health and digestive health, and is associated with increased risk of metabolic disease, cardiovascular disease, type 2 diabetes, liver disease, and obesity, Defendant's representations that the Products benefit health generally, and gut health specifically, are false, or at least highly misleading.

97. First, with authoritative governmental and medical bodies like the FDA, WHO, and Scientific Committee on the Dietary Guidelines for Americans recommending limiting added sugar consumption to less than 5% or 10% of daily calories for a healthy diet, and less than 5% of calories for a healthy food, it is misleading for Defendant to tell consumers to drink Poppi "For a Healthy Gut" when up to 100% of its calories come from FA Sugar.

⁹⁰ Renan Oliveira Corrêa, et al., *Inulin diet uncovers complex diet-microbiota-immune cell interactions remodeling the gut epithelium*, MICROBIOME, Vol. 11, No. 1, 90 (Apr. 26 2023).

⁹¹ Samuel M. Lancaster, et al. *Global, distinctive, and personal changes in molecular and microbial profiles by specific fibers in humans*, CELL HOST & MICROBE, Vol. 30, No. 6, 848-62 (2022).

⁹² Weill Cornell Medicine, *Common Type of Fiber May Trigger Bowel Inflammation* (May 2, 2024), available at <https://news.weill.cornell.edu/news/2024/05/common-type-of-fiber-may-trigger-bowel-inflammation>.

1 98. Second, because scientific evidence does not show meaningful gut health benefits from
 2 consuming the (negligible) fiber in Poppi, Defendant's representations that the Products benefit gut health,
 3 specifically, are false, or at least highly misleading.

4 99. While representing that Poppi benefits health generally, and gut health specifically,
 5 Defendant regularly and intentionally omits material information regarding the dangers of the Products' FA
 6 Sugar content, regarding the harm to overall health, and specifically gut health, that the FA Sugars in the
 7 Products cause. Defendant also regularly and intentionally omits material information regarding the dangers
 8 of consuming inulin fiber. Defendant is under a duty to disclose this information to consumers because (a)
 9 Defendant is revealing some information about its Products—enough to suggest they are beneficial to
 10 overall health and gut health—without revealing additional material information, (b) Defendant's deceptive
 11 omissions concern human health, and specifically the detrimental health consequences of consuming its
 12 Products, (c) Defendant was in a superior position to know of the dangers presented by the FA Sugar and
 13 inulin fiber in its Products, as it is a food company whose business depends upon food science and policy,
 14 and (d) Defendant actively concealed material facts not known to Plaintiff and the Class.

15 **VI. POPPI'S LABELING VIOLATES CALIFORNIA AND FEDERAL LAW**

16 100. The Products and their challenged labeling statements violate California Health and Safety
 17 Code §§109875, *et. seq.* (the "Sherman Law"), which has expressly adopted the federal food labeling
 18 requirements as its own. *See e.g., id.* § 110100, *id.* § 110670 ("Any food is misbranded if its labeling does
 19 not conform with the requirements for nutrition labeling as set forth in Section 403(r) (21 U.S.C. Sec. 343(r))
 20 of the federal act and the regulation adopted pursuant thereto.").

21 101. First, the challenged claims are false and misleading for the reasons described herein, in
 22 violation of 21 U.S.C. § 343(a), which deems misbranded any food whose "label is false or misleading in
 23 any particular." Defendant accordingly also violated California's parallel provision of the Sherman Law.
 24 *See* Cal. Health & Safety Code § 110670.

25 102. Second, despite making the challenged claims, Defendant "fail[ed] to reveal facts that are
 26 material in light of other representations made or suggested by the statement[s], word[s], design[s],
 27 device[s], or any combination thereof," in violation of 21 C.F.R. § 1.21(a)(1). Such facts include the
 28 detrimental health consequences of consuming the Products at typical levels, including (1) harm to the gut

1 or digestive system and (2) increased risk of other chronic diseases such as metabolic disease, cardiovascular
2 disease, type 2 diabetes, liver disease, and obesity.

3 103. Third, Defendant failed to reveal facts that were “[m]aterial with respect to the consequences
4 which may result from use of the article under” both “[t]he conditions prescribed in such labeling,” and
5 “such conditions of use as are customary or usual,” in violation of § 1.21(a)(2). Namely, Defendant failed
6 to disclose the harm to the digestive system that is likely to result from the usual consumption of the Products
7 in the customary and prescribed manners.

8 **VII. PLAINTIFF’S PURCHASE, RELIANCE, AND INJURY**

9 104. Plaintiff Vanessa Jackson started purchasing Poppi approximately one and a half years ago.
10 Ms. Jackson recalls purchasing several multipacks each month, at stores such as Sprouts, Ralphs, Costco,
11 and Smart & Final, in San Diego, California. Ms. Jackson has purchased Poppi in at least the following
12 flavors: Cola, Orange, Strawberry Lemon, Root Beer, and Ginger Ale.

13 105. When purchasing Poppi, Ms. Jackson was seeking a beverage whose consumption would
14 benefit her health generally and her gut health specifically. In purchasing Poppi, she was exposed to, read,
15 and relied on Defendant’s representations, including “gut health” and “prebiotics for a healthy gut.” Based
16 on these label claims, and the context of the labels as a whole, Ms. Jackson reasonably believed that
17 consuming Poppi would provide her with health benefits, and specifically gut health benefits, and would be
18 beneficial rather than detrimental to her health. For the reasons previously described, however, these
19 labeling claims were and are deceptive.

20 106. Plaintiff is not a nutritionist, food expert, or food scientist, but rather a lay consumer who did
21 not have the specialized knowledge that Defendant had about the scientific literature regarding the likely
22 health effects of consuming the Poppi Products given their FA Sugar content. At the time of her purchases,
23 Plaintiff was unaware of the extent to which consuming high amounts of FA Sugar adversely affects health
24 or what amount of FA Sugar might have such an effect, especially in light of Poppi’s other ingredients.

25 107. Plaintiff acted reasonably in relying on the challenged labeling claims, which Defendant
26 intentionally placed on Poppi’s labeling with the intent to induce average consumers into purchasing Poppi.
27
28

1 108. Plaintiff would not have purchased Poppi if she knew that the labeling claims were false and
2 misleading in that Poppi does not provide the claimed benefits and consuming it actually harms overall
3 health and digestive health.

4 109. The Products cost more than similar products without misleading labeling, and would have
5 cost less absent Defendant's false and misleading statements and omissions.

6 110. Through the misleading labeling claims and omissions, Defendant was able to gain a greater
7 share of the soda market than it would have otherwise and also increased the size of the market.

8 111. Plaintiff paid more for Poppi, and would only have been willing to pay less, or unwilling to
9 purchase Poppi at all, absent the false and misleading labeling complained of herein.

10 112. Plaintiff would not have purchased the Products if she had known that the Products were
11 misbranded pursuant to California and FDA regulations or that the challenged claims were false or
12 misleading.

13 113. For these reasons, the Products were worth less than what Plaintiff and the Class paid for
14 them.

15 114. Plaintiff and the Class lost money as a result of Defendant's deceptive claims, omissions, and
16 practices in that they did not receive what they paid for when purchasing the Products.

17 115. Plaintiff still wishes to purchase beverages whose consumption benefits health generally and
18 gut health specifically. She continues to see Poppi at stores where she shops. Plaintiff would purchase the
19 Products in the future if the Products were as represented, but unless Defendant is enjoined in the manner
20 Plaintiff requests, she will not be able to rely on Defendant's claims in the future.

21 116. Plaintiff would purchase Poppi if she could trust that Poppi's representations were true, and
22 not false or misleading, but absent an injunction, Plaintiff will be unable to trust the representations or other
23 similar health and wellness representations on Poppi when Plaintiff encounters them in the marketplace.

24 117. Plaintiff's substantive right to a marketplace free of fraud, where she is entitled to rely with
25 confidence on representations such as those made by Defendant, continues to be violated every time Plaintiff
26 is exposed to the misleading labeling claims.

27 118. Plaintiff's legal remedies are inadequate to prevent these future injuries.
28

CLASS ACTION ALLEGATIONS

119. While reserving the right to redefine or amend the class definition prior to or as part of a motion seeking class certification, pursuant to Federal Rule of Civil Procedure 23, Plaintiff seeks to represent a class of all persons in California who, at any time from four years preceding the date of the filing of this Complaint to the time a class is notified (the “Class Period”), purchased, for personal or household use, and not for resale or distribution, any of the Products (the “Class”).

120. The members in the proposed Class are so numerous that individual joinder of all members is impracticable, and the disposition of the claims of all Class Members in a single action will provide substantial benefits to the parties and Court.

121. Questions of law and fact common to Plaintiff and the Class include:

- a. whether Defendant communicated messages regarding digestive health and overall healthfulness of the Products through its packaging and advertising;
- b. whether those messages were material, or likely to be material, to a reasonable consumer;
- c. whether the challenged claims are false, misleading, or reasonably likely to deceive a reasonable consumer;
- d. whether Defendant’s conduct violates public policy;
- e. whether Defendant’s conduct violates state or federal food statutes or regulations;
- f. whether Defendant’s conduct breached any warranties;
- g. the proper amount of damages, including punitive damages;
- h. the proper amount of restitution; and
- i. the proper amount of attorneys’ fees.

122. These common questions of law and fact predominate over questions that affect only individual Class Members.

123. Plaintiff’s claims are typical of Class Members’ claims because they are based on the same underlying facts, events, and circumstances relating to Defendant’s conduct. Specifically, all Class Members, including Plaintiff, were subjected to the same misleading and deceptive conduct when they purchased the Products and suffered economic injury because the Products are misrepresented. Absent

Defendant's business practice of deceptively and unlawfully labeling the Products, Plaintiff and Class Members would not have purchased the Products.

124. Plaintiff will fairly and adequately represent and protect the interests of the Class, has no interests incompatible with the interests of the Class, and has retained counsel competent and experienced in class action litigation, and specifically in litigation involving the false and misleading advertising of foods and beverages.

125. Class treatment is superior to other options for resolution of the controversy because the relief sought for each Class Member is small, such that, absent representative litigation, it would be infeasible for Class Members to redress the wrongs done to them.

126. Defendant has acted on grounds applicable to the Class, thereby making appropriate declaratory relief concerning the Class as a whole.

127. As a result of the foregoing, class treatment is appropriate under Fed. R. Civ. P. 23(a), and 23(b)(3).

CAUSES OF ACTION

FIRST CAUSE OF ACTION

Violations of the Unfair Competition Law, Cal. Bus. & Prof. Code §§ 17200 *et seq.*

128. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

129. The UCL prohibits any "unlawful, unfair or fraudulent business act or practice." Cal. Bus. & Prof. Code § 17200.

130. The acts, omissions, misrepresentations, practices, and non-disclosures of Defendant as alleged herein constitute business acts and practices.

Fraudulent

131. A statement or practice is fraudulent under the UCL if it is likely to deceive a significant portion of the public, applying an objective reasonable consumer test.

132. As set forth herein, Defendant's claims relating to the Products are likely to deceive reasonable consumers and the public.

Unlawful

133. The acts alleged herein are “unlawful” under the UCL in that they violate at least the following laws:

- The False Advertising Law, Cal. Bus. & Prof. Code §§ 17500 *et seq.*;
- The Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750 *et seq.*;
- The Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301 *et seq.*, and its implementing regulations; and
- The California Sherman Food, Drug, and Cosmetic Law, Cal. Health & Safety Code §§ 110100 *et seq.*

Unfair

134. Defendant’s conduct with respect to the labeling, advertising, and sale of the Products was unfair because Defendant’s conduct was immoral, unethical, unscrupulous, or substantially injurious to consumers, and the utility of its conduct, if any, does not outweigh the gravity of the harm to its victims.

135. Defendant’s conduct with respect to the labeling, advertising, and sale of the Products was and is also unfair because it violates public policy as declared by specific constitutional, statutory or regulatory provisions, including but not necessarily limited to the False Advertising Law, portions of the Federal Food, Drug, and Cosmetic Act, and portions of the California Sherman Food, Drug, and Cosmetic Law.

136. Defendant’s conduct with respect to the labeling, advertising, and sale of the Products was and is also unfair because the consumer injury was substantial, not outweighed by benefits to consumers or competition, and not one consumers themselves could reasonably have avoided. Specifically, the increase in profits obtained by Defendant through the misleading labeling does not outweigh the harm to Class Members who were deceived into purchasing the Products believing they were beneficial to gut health and overall health when in fact they are of the type that is likely to detriment gut health and overall health.

137. Defendant profited from the sale of the falsely, deceptively, and unlawfully advertised Products to unwary consumers.

138. Plaintiff has suffered injury in fact as a result of Defendant’s unlawful conduct.

139. Plaintiff and the Class also seek an order for the restitution of all monies from the sale of the Products, which were unjustly acquired through acts of unlawful competition.

140. Because Plaintiff's claims under the "unfair" prong of the UCL sweep more broadly than their claims under the FAL, CLRA, or UCL's "fraudulent" prong, Plaintiff's legal remedies are inadequate to fully compensate Plaintiff for all of Defendant's challenged behavior.

SECOND CAUSE OF ACTION

Violations of the False Advertising Law, Cal. Bus. & Prof. Code §§ 17500 *et seq.*

141. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

142. The FAL provides that "[i]t is unlawful for any person, firm, corporation or association, or any employee thereof with intent directly or indirectly to dispose of real or personal property or to perform services" to disseminate any statement "which is untrue or misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading." Cal. Bus. & Prof. Code § 17500.

143. It is also unlawful under the FAL to disseminate statements concerning property or services that are "untrue or misleading, and which is known, or which by the exercise of reasonable care should be known, to be untrue or misleading." *Id.*

144. As alleged herein, the advertisements, labeling, policies, acts, and practices of Defendant relating to the Products misled consumers acting reasonably as to the digestive health impact and overall health impact of the products.

145. Plaintiff suffered injury in fact as a result of Defendant's actions as set forth herein because Plaintiff purchased the Products in reliance on Defendant's false and misleading marketing claims stating or suggesting that the Products, among other things, are beneficial to digestive health and overall health.

146. Defendant's business practices as alleged herein constitute unfair, deceptive, untrue, and misleading advertising pursuant to the FAL because Defendant has advertised the Products in a manner that is untrue and misleading, which Defendant knew or reasonably should have known, and omitted material information from the Defendant's labeling.

147. Defendant profited from the sale of the falsely and deceptively advertised Products to unwary consumers.

148. As a result, Plaintiff, the Class, and the general public are entitled to restitution, and an order for the disgorgement of the funds by which Defendant was unjustly enriched.

149. Because the Court has broad discretion to award restitution under the FAL and could, when assessing restitution under the FAL, apply a standard different than that applied to assessing damages under the CLRA or commercial code (for Plaintiff's breach of warranty claims), and restitution is not limited to returning to Plaintiff and class members monies in which they have an interest, but more broadly serves to deter the offender and others from future violations, the legal remedies available under the CLRA and commercial code are more limited than the equitable remedies available under the FAL, and are therefore inadequate.

THIRD CAUSE OF ACTION

Violations of the Consumers Legal Remedies Act, Cal. Civ. Code §§ 1750 *et seq.*

150. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

151. The CLRA prohibits deceptive practices in connection with the conduct of a business that provides goods, property, or services primarily for personal, family, or household purposes.

152. Defendant's false and misleading labeling and other policies, acts, and practices were designed to, and did, induce the purchase and use of the Products for personal, family, or household purposes by Plaintiff and Class Members, and violated and continue to violate the following sections of the CLRA:

a. § 1770(a)(5): representing that goods have characteristics, uses, or benefits which they do not have;

b. § 1770(a)(7): representing that goods are of a particular standard, quality, or grade if they are of another;

c. § 1770(a)(9): advertising goods with intent not to sell them as advertised; and

d. § 1770(a)(16): representing the subject of a transaction has been supplied in accordance with a previous representation when it has not.

153. Defendant profited from the sale of the falsely, deceptively, and unlawfully advertised Products to unwary consumers.

154. Defendant's wrongful business practices constituted, and constitute, a continuing course of conduct in violation of the CLRA.

155. Pursuant to California Civil Code § 1782, more than thirty (30) days before filing this lawsuit, Plaintiff sent written notice of her claims and Defendant's particular violations of the Act to Defendant by certified mail, return receipt requested, but Defendant has failed to implement remedial measures.

156. As a result, Plaintiff and the Class have suffered harm, and therefore seek (a) actual damages resulting from purchases of the Products sold throughout the Class Period to all Class Members, (b) punitive damages, (c) restitution, and (d) attorneys' fees and costs. *See* Cal. Civ. Code § 1782(d).

157. In compliance with Cal. Civ. Code § 1780(d), a venue affidavit is filed concurrently herewith.

FOURTH CAUSE OF ACTION

Breaches of Express Warranties, Cal. Com. Code § 2313(1)

158. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth in full herein.

159. Through the Products' labeling, Defendant made affirmations of fact or promises, or description of goods, that, *inter alia*, the Products are beneficial to digestive and overall health, including "For a Healthy Gut," "Be Gut Healthy," "better for you prebiotic soda," and "Prebiotics for a Healthy Gut."

160. These representations were "part of the basis of the bargain," in that Plaintiff and the Class purchased the Products in reasonable reliance on those statements. Cal. Com. Code § 2313(1).

161. Defendant breached its express warranties by selling Products that are not beneficial to digestive or overall health, but rather contain high levels of FA Sugar that are likely to harm digestive health and increase the risk of chronic diseases.

162. That breach actually and proximately caused injury in the form of the lost purchase price that Plaintiff and Class Members paid for the Products.

163. As a result, Plaintiff seeks, on behalf of herself and other Class Members, actual damages arising as a result of Defendant's breaches of express warranty, including, without limitation, expectation damages.

FIFTH CAUSE OF ACTION

Breach of Implied Warranty of Merchantability, Cal. Com. Code § 2314

164. Plaintiff realleges and incorporates the allegations elsewhere in the Complaint as if set forth fully herein.

165. Defendant, through its acts set forth herein, in the sale, marketing, and promotion of Poppi bearing statements outlined in paragraph 159, made representations, that, *inter alia*, the Products are beneficial to digestive and overall health.

166. Defendant is a merchant with respect to the goods of this kind which were sold to Plaintiff and the Class, and there were, in the sale to Plaintiff and the Class, implied warranties that those goods were merchantable.

167. However, Defendant breached that implied warranty because, for the reasons discussed herein, the Products were and are not beneficial to digestive and overall health.

168. As an actual and proximate result of Defendant's conduct, Plaintiff and the Class did not receive goods as impliedly warranted by Defendant to be merchantable in that they did not conform to promises and affirmations made on the container or label of the goods.

169. As a result, Plaintiff seeks actual damages, including, without limitation, expectation damages.

PRAYER FOR RELIEF

170. Wherefore, Plaintiff, on behalf of herself, all others similarly situated, and the general public, prays for judgment against Defendant as to each and every cause of action, and the following remedies:

- a. An Order declaring this action to be a proper class action, appointing Plaintiff as Class Representative, and appointing Plaintiff's undersigned counsel as Class Counsel;
- b. An Order requiring Defendant to bear the cost of Class Notice;
- c. An Order requiring Defendant to disgorge all monies, revenues, and profits obtained by means of any wrongful act or practice;

d. An Order requiring Defendant to pay restitution to restore all funds acquired by means of any act or practice declared by this Court to be an unlawful, unfair, or fraudulent business act or practice, or untrue or misleading advertising, plus pre-and post-judgment interest thereon;

e. An Order requiring Defendant to pay compensatory damages and punitive damages as permitted by law;

f. An award of attorneys' fees and costs; and

g. Any other and further relief that Court deems necessary, just, or proper.

JURY DEMAND

171. Plaintiff hereby demands a trial by jury on all issues so triable.

Dated: September 23, 2024

/s/ Melanie R. Monroe

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